

SEQUENCE LISTING

<110> Macina, Roberto A
Nair, Manoj
Chen, Seiyu

<120> Compositions and Methods Relating to Lung Specific Genes

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<212> DNA

<213> Homo sapiens

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<210> 25
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21

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<212> DNA
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<400> 29
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<210> 30
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<210> 31
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<220>
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<210> 32
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<223> Description of Artificial Sequence: Synthetic

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<210> 33
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<222> (1001)

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<212> PRT
<213> Homo sapiens

31

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 35 40 45
 Tyr Phe Cys Ala Arg Glu Pro Pro Ala Pro Asn Tyr Phe Asp Cys Trp
 50 55 60
 Ser Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro
 65 70 75 80
 Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Gly Gly Thr
 85 90 95
 Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr
 100 105 110
 Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro
 115 120 125
 Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr
 130 135 140
 Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Thr Cys Asn Val Asn
 145 150 155 160
 His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Leu Lys Thr
 165 170 175
 Pro Leu Gly Asp Thr Thr His Thr Cys Pro Arg Cys Pro Glu Pro Lys
 180 185 190
 Ser Cys Asp Thr Pro Pro Pro Cys Pro Arg Cys Pro Glu Pro Lys
 195 200 205
 Cys Asp Thr Pro Pro Pro Cys Pro Arg Cys Pro Ala Pro Glu Leu Leu
 210 215 220
 Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
 225 230 235 240
 Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
 245 250 255
 His Glu Asp Pro Glu Val Gln Phe Lys Trp Tyr Val Asp Gly Val Glu
 260 265 270
 Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr
 275 280 285
 Phe Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
 290 295 300
 Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro

305

310

315

320

Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln
 325 330 335

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
 340 345 350

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
 355 360 365

Glu Trp Glu Ser Ser Gly Gln Pro Glu Asn Asn Tyr Asn Thr Thr Pro
 370 375 380

Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
 385 390 395 400

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Ile Phe Ser Cys Ser Val
 405 410 415

Met His Glu Ala Leu His Asn Arg Phe Thr Gln Lys Ser Leu Ser Leu
 420 425 430

Ser Pro Gly Lys
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<210> 40

<211> 168

<212> PRT

<213> Homo sapiens

<400> 40

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Tyr Thr Val Gly Val Ser Asp Pro Ala Ala Gly Ser Gln Gly Pro Leu
 35 40 45

Ser Thr Thr Leu Thr Phe Ser Ser Pro Val Thr Asn Gln Ala Ile Ala
 50 55 60

Ile Pro Val Thr Val Ala Phe Val Met Asp Arg Arg Gly Pro Gly Pro
 65 70 75 80

Tyr Gly Ala Ser Leu Phe Gln His Phe Leu Asp Ser Tyr Gln Val Met
 85 90 95

Phe Phe Thr Leu Phe Ala Leu Ala Gly Thr Ala Val Met Ile Ile
 100 105 110

Ala Tyr His Thr Val Cys Thr Pro Arg Asp Leu Ala Val Pro Ala Ala
 115 120 125

Leu Thr Pro Arg Ala Ser Pro Gly His Ser Pro His Tyr Phe Ala Ala
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Ser Ser Pro Thr Ser Pro Asn Ala Leu Pro Pro Ala Arg Lys Ala Ser
 145 150 155 160

Pro Pro Ser Gly Leu Trp Ser Pro
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<210> 41
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 <213> Homo sapiens

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Trp Gly Leu Thr Ala Ala Ser Pro Gly Ser Ser Trp Gly His Leu Ser
 35 40 45

Ser Lys Val Cys Thr Gln Glu Val Pro His His Ile Gln Pro His Gly
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Ser Pro Arg Ser Ala Arg Gln Gln Ile Arg Ala Pro Cys His
 65 70 75

<210> 42
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 35 40 45

Arg Ala Trp Ile Thr Ala Pro Val Ala Leu Arg Glu Gly Glu Asp Leu
 50 55 60

Ser Lys Lys Asn Pro Ile Ala Lys Ile His Ser Asp Leu Ala Glu Glu
 65 70 75 80

Arg Gly Leu Lys Ile Thr Tyr Lys Tyr Thr Gly Lys Gly Ile Thr Glu
 85 90 95

Pro Pro Phe Gly Ile Phe Val Phe Asn Lys Asp Thr Gly Glu Leu Asn
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Val Thr Ser Ile Leu Asp Arg Glu Glu Thr Pro Phe Phe Leu Leu Thr
 115 120 125

Gly Tyr Ala Leu Asp Ala Arg Gly Asn Asn Val Glu Lys Pro Leu Glu
 130 135 140

Leu Arg Ile Lys Val Leu Asp Ile Asn Asp Asn Glu Pro Val Phe Thr
 145 150 155 160

Gln Asp Val Phe Val Gly Ser Val Glu Glu Leu Ser Ala Ala His Thr
 165 170 175

Leu Val Met Lys Ile Asn Ala Thr Asp Ala Asp Glu Pro Asn Thr Leu
 180 185 190

Asn Ser Lys Ile Ser Tyr Arg Ile Val Ser Leu Glu Pro Ala Tyr Pro
 195 200 205

Pro Val Phe Tyr Leu Asn Lys Asp Thr Gly Glu Ile Tyr Thr Thr Ser
 210 215 220

Val Thr Leu Asp Arg Glu Glu His Ser Ser Tyr Thr Leu Thr Val Glu
 225 230 235 240

Ala Arg Asp Gly Asn Gly Glu Val Thr Asp Lys Pro Val Lys Gln Ala
 245 250 255

Gln Val Gln Ile Arg Ile Leu Asp Val Asn Asp Asn Ile Pro Val Val
 260 265 270

Glu Asn Lys Val Leu Glu Gly Met Val Glu Glu Asn Gln Val Asn Val
 275 280 285

Glu Val Thr Arg Ile Lys Val Phe Asp Ala Asp Glu Ile Gly Ser Asp
 290 295 300

Asn Trp Leu Ala Asn Phe Thr Phe Ala Ser Gly Asn Glu Gly Gly Tyr
 305 310 315 320

Phe His Ile Glu Thr Asp Ala Gln Thr Asn Glu Gly Ile Val Thr Leu
 325 330 335

Ile Lys Glu Val Asp Tyr Glu Glu Met Lys Asn Leu Asp Phe Ser Val
 340 345 350

Ile Val Ala Asn Lys Ala Ala Phe His Lys Ser Ile Arg Ser Lys Tyr
 355 360 365

Lys Pro Thr Pro Ile Pro Ile Lys Val Lys Val Lys Asn Val Lys Glu
 370 375 380

Gly Ile His Phe Lys Ser Ser Val Ile Ser Ile Tyr Val Ser Glu Ser
 385 390 395 400

Met Asp Arg Ser Ser Lys Gly Gln Ile Ile Gly Asn Phe Gln Ala Phe
 405 410 415

Asp Glu Asp Thr Gly Leu Pro Ala His Ala Arg Tyr Val Lys Leu Glu
 420 425 430

Asp Arg Asp Asn Trp Ile Ser Val Asp Ser Val Thr Ser Glu Ile Lys

435

440

445

Leu Ala Lys Leu Pro Asp Phe Glu Ser Arg Tyr Val Gln Asn Gly Thr
 450 455 460

Tyr Thr Val Lys Ile Val Ala Ile Ser Glu Asp Tyr Pro Arg Lys Thr
 465 470 475 480

Ile Thr Gly Thr Val Leu Ile Asn Val Glu Asp Ile Asn Asp Asn Cys
 485 490 495

Pro Thr Leu Ile Glu Pro Val Gln Thr Ile Cys His Asp Ala Glu Tyr
 500 505 510

Val Asn Val Thr Ala Glu Asp Leu Asp Gly His Pro Asn Ser Gly Pro
 515 520 525

Phe Ser Phe Ser Val Ile Asp Lys Pro Pro Gly Met Ala Glu Lys Trp
 530 535 540

Lys Ile Ala Arg Gln Glu Ser Thr Ser Val Leu Leu Gln Gln Ser Glu
 545 550 555 560

Lys Lys Leu Gly Arg Ser Glu Ile Gln Phe Leu Ile Ser Asp Asn Gln
 565 570 575

Gly Phe Ser Cys Pro Glu Lys Gln Val Leu Thr Leu Thr Val Cys Glu
 580 585 590

Cys Leu His Gly Ser Gly Cys Arg Glu Ala Gln His Asp Ser Tyr Val
 595 600 605

Gly Leu Gly Pro Ala Ala Ile Ala Leu Met Ile Leu Ala Phe Leu Leu
 610 615 620

Leu Leu Leu Val Pro Leu Leu Leu Met Cys His Cys Gly Lys Gly
 625 630 635 640

Ala Lys Gly Phe Thr Pro Ile Pro Gly Thr Ile Glu Met Leu His Pro
 645 650 655

Trp Asn Asn Glu Gly Ala Pro Pro Glu Asp Lys Val Val Pro Ser Phe
 660 665 670

Leu Pro Val Asp Gln Gly Gly Ser Leu Val Gly Arg Asn Gly Val Gly
 675 680 685

Gly Met Ala Lys Glu Ala Thr Met Lys Gly Ser Ser Ser Ala Ser Ile
 690 695 700

Val Lys Gly Gln His Glu Met Ser Glu Met Asp Gly Arg Trp Glu Glu
 705 710 715 720

His Arg Ser Leu Leu Ser Gly Arg Ala Thr Gln Phe Thr Gly Ala Thr
 725 730 735

Gly Ala Ile Met Thr Thr Glu Thr Thr Lys Thr Ala Arg Ala Thr Gly
 740 745 750

Ala Ser Arg Asp Met Ala Gly Ala Gln Ala Ala Ala Val Ala Leu Asn
 755 760 765

Glu Glu Phe Leu Arg Asn Tyr Phe Thr Asp Lys Ala Ala Ser Tyr Thr
 770 775 780

Glu Glu Asp Glu Asn His Thr Ala Lys Asp Cys Leu Leu Val Tyr Ser
 785 790 795 800

Gln Glu Glu Thr Glu Ser Leu Asn Ala Ser Ile Gly Cys Cys Ser Phe
 805 810 815

Ile Glu Gly Glu Leu Asp Asp Arg Phe Leu Asp Asp Leu Gly Leu Lys
 820 825 830

Phe Lys Thr Leu Ala Glu Val Cys Leu Gly Gln Lys Ile Asp Ile Asn
 835 840 845

Lys Glu Ile Glu Gln Arg Gln Lys Pro Ala Thr Glu Thr Ser Met Asn
 850 855 860

Thr Ala Ser His Ser Leu Cys Glu Gln Thr Met Val Asn Ser Glu Asn
 865 870 875 880

Thr Tyr Ser Ser Gly Ser Ser Phe Pro Val Pro Lys Ser Leu Gln Glu
 885 890 895

Ala Asn Ala Glu Lys Val Thr Gln Glu Ile Val Thr Glu Arg Ser Val
 900 905 910

Ser Ser Arg Gln Ala Gln Lys Val Ala Thr Pro Leu Pro Asp Pro Met
 915 920 925

Ala Ser Arg Asn Val Ile Ala Thr Glu Thr Ser Tyr Val Thr Gly Ser
 930 935 940

Thr Met Pro Pro Thr Thr Val Ile Leu Gly Pro Ser Gln Pro Gln Ser
 945 950 955 960

Leu Ile Val Thr Glu Arg Val Tyr Ala Pro Ala Ser Thr Leu Val Asp
 965 970 975

Gln Pro Tyr Ala Asn Glu Gly Thr Val Val Val Thr Glu Arg Val Ile
 980 985 990

Gln Pro His Gly Gly Ser Asn Pro Leu Glu Gly Thr Gln His Leu
 995 1000 1005

Gln Asp Val Pro Tyr Val Met Val Arg Glu Arg Glu Ser Phe Leu Ala
 1010 1015 1020

Pro Ser Ser Gly Val Gln Pro Thr Leu Ala Met Pro Asn Ile Ala Val
 1025 1030 1035 1040

Gly Gln Asn Val Thr Val Thr Glu Arg Val Leu Ala Pro Ala Ser Thr
 1045 1050 1055

Leu Gln Ser Ser Tyr Gln Ile Pro Thr Glu Asn Ser Met Thr Ala Arg
 1060 1065 1070

Asn Thr Thr Val Ser Gly Ala Gly Val Pro Gly Pro Leu Pro Asp Phe
 1075 1080 1085

Gly Leu Glu Glu Ser Gly His Ser Asn Ser Thr Ile Thr Thr Ser Ser
 1090 1095 1100

Thr Arg Val Thr Lys His Ser Thr Val Gln His Ser Tyr Ser
 1105 1110 1115

<210> 43

<211> 97

<212> PRT

<213> Homo sapiens

<400> 43

Met Thr Lys Gly Thr Ser Ser Phe Gly Lys Arg Arg Asn Lys Thr His
 1 5 10 15

Thr Leu Cys Arg Arg Cys Gly Ser Lys Ala Tyr His Leu Gln Lys Ser
 20 25 30

Thr Cys Gly Lys Cys Gly Tyr Pro Ala Lys Arg Lys Arg Lys Tyr Asn
 35 40 45

Trp Ser Ala Lys Ala Lys Arg Arg Asn Thr Thr Gly Thr Gly Arg Met
 50 55 60

Arg His Leu Lys Ile Val Tyr Arg Arg Phe Arg His Gly Phe Arg Glu
 65 70 75 80

Gly Thr Thr Pro Lys Pro Lys Arg Ala Ala Val Ala Ala Ser Ser Ser
 85 90 95

Ser

<210> 44

<211> 889

<212> PRT

<213> Homo sapiens

<400> 44

Met Ala Ala Ala Val Gly Val Arg Gly Arg Tyr Glu Leu Pro Pro Cys
 1 5 10 15

Ser Gly Pro Gly Trp Leu Leu Ser Leu Ser Ala Leu Leu Ser Val Ala
 20 25 30

Ala Arg Gly Ala Phe Ala Thr Thr His Trp Val Val Thr Glu Asp Gly
 35 40 45

Lys Ile Gln Gln Gln Val Asp Ser Pro Met Asn Leu Lys His Pro His
 50 55 60

Asp Leu Val Ile Leu Met Arg Gln Glu Ala Thr Val Asn Tyr Leu Lys
 65 70 75 80

Glu Leu Glu Lys Gln Leu Val Ala Gln Lys Ile His Ile Glu Glu Asn
 85 90 95
 Glu Asp Arg Asp Thr Gly Leu Glu Gln Arg His Asn Lys Glu Asp Pro
 100 105 110
 Asp Cys Ile Lys Ala Lys Val Pro Leu Gly Asp Leu Asp Leu Tyr Asp
 115 120 125
 Gly Thr Tyr Ile Thr Leu Glu Ser Lys Asp Ile Ser Pro Glu Asp Tyr
 130 135 140
 Ile Asp Thr Glu Ser Pro Val Pro Pro Asp Pro Glu Gln Pro Asp Cys
 145 150 155 160
 Thr Lys Ile Leu Glu Leu Pro Tyr Ser Ile His Ala Phe Gln His Leu
 165 170 175
 Arg Gly Val Gln Glu Arg Val Asn Leu Ser Ala Pro Leu Leu Pro Lys
 180 185 190
 Glu Asp Pro Ile Phe Thr Tyr Leu Ser Lys Arg Leu Gly Arg Ser Ile
 195 200 205
 Asp Asp Ile Gly His Leu Ile His Glu Gly Leu Gln Lys Asn Thr Ser
 210 215 220
 Ser Trp Val Leu Tyr Asn Met Ala Ser Phe Tyr Trp Arg Ile Lys Asn
 225 230 235 240
 Glu Pro Tyr Gln Val Val Glu Cys Ala Met Arg Ala Leu His Phe Ser
 245 250 255
 Ser Arg His Asn Lys Asp Ile Ala Leu Val Asn Leu Ala Asn Val Leu
 260 265 270
 His Arg Ala His Phe Ser Ala Asp Ala Ala Val Val Val His Ala Ala
 275 280 285
 Leu Asp Asp Ser Asp Phe Phe Thr Ser Tyr Tyr Thr Leu Gly Asn Ile
 290 295 300
 Tyr Ala Met Leu Gly Glu Tyr Asn His Ser Val Leu Cys Tyr Asp His
 305 310 315 320
 Ala Leu Gln Ala Arg Pro Gly Phe Glu Gln Ala Ile Lys Arg Lys His
 325 330 335
 Ala Val Leu Cys Gln Gln Lys Leu Glu Gln Lys Leu Glu Ala Gln His
 340 345 350
 Arg Ser Leu Gln Arg Thr Leu Asn Glu Leu Lys Glu Tyr Gln Lys Gln
 355 360 365
 His Asp His Tyr Leu Arg Gln Gln Glu Ile Leu Glu Lys His Lys Leu
 370 375 380
 Ile Gln Glu Glu Gln Ile Leu Arg Asn Ile Ile His Glu Thr Gln Met

385	390	395	400
Ala Lys Glu Ala Gln Leu Gly Asn His Gln Ile Cys Arg Leu Val Asn			
405		410	415
Gln Gln His Ser Leu His Cys Gln Trp Asp Gln Pro Val Arg Tyr His			
420	425	430	
Arg Gly Asp Ile Phe Glu Asn Val Asp Tyr Val Gln Phe Gly Glu Asp			
435	440	445	
Ser Ser Thr Ser Ser Met Met Ser Val Asn Phe Asp Val Gln Ser Asn			
450	455	460	
Gln Ser Asp Ile Asn Asp Ser Val Lys Ser Ser Pro Val Ala His Ser			
465	470	475	480
Ile Leu Trp Ile Trp Gly Arg Asp Ser Asp Ala Tyr Arg Asp Lys Gln			
485	490	495	
His Ile Leu Trp Pro Lys Arg Ala Asp Cys Thr Glu Ser Tyr Pro Arg			
500	505	510	
Val Pro Val Gly Gly Glu Leu Pro Thr Tyr Phe Leu Pro Pro Glu Asn			
515	520	525	
Lys Gly Leu Arg Ile His Glu Leu Ser Ser Asp Asp Tyr Ser Thr Glu			
530	535	540	
Glu Glu Ala Gln Thr Pro Asp Cys Ser Ile Thr Asp Phe Arg Lys Ser			
545	550	555	560
His Thr Leu Ser Tyr Leu Val Lys Glu Leu Glu Val Arg Met Asp Leu			
565	570	575	
Lys Ala Lys Met Pro Asp Asp His Ala Arg Lys Ile Leu Leu Ser Arg			
580	585	590	
Ile Asn Asn Tyr Thr Ile Pro Glu Glu Ile Gly Ser Phe Leu Phe			
595	600	605	
His Ala Ile Asn Lys Pro Asn Ala Pro Ile Trp Leu Ile Leu Asn Glu			
610	615	620	
Ala Gly Leu Tyr Trp Arg Ala Val Gly Asn Ser Thr Phe Ala Ile Ala			
625	630	635	640
Cys Leu Gln Arg Ala Leu Asn Leu Ala Pro Leu Gln Tyr Gln Asp Val			
645	650	655	
Pro Leu Val Asn Leu Ala Asn Leu Leu Ile His Tyr Gly Leu His Leu			
660	665	670	
Asp Ala Thr Lys Leu Leu Leu Gln Ala Leu Ala Ile Asn Ser Ser Glu			
675	680	685	
Pro Leu Thr Phe Leu Ser Leu Gly Asn Ala Tyr Leu Ala Leu Lys Asn			
690	695	700	

Ile Ser Gly Ala Leu Glu Ala Phe Arg Gln Ala Leu Lys Leu Thr Thr
 705 710 715 720

Lys Cys Pro Glu Cys Glu Asn Ser Leu Lys Leu Ile Arg Cys Met Gln
 725 730 735

Phe Tyr Pro Phe Leu Tyr Asn Ile Thr Ser Ser Val Cys Ser Gly Thr
 740 745 750

Val Val Glu Glu Ser Asn Gly Ser Asp Glu Met Glu Asn Ser Asp Glu
 755 760 765

Thr Lys Met Ser Glu Glu Ile Leu Ala Leu Val Asp Glu Phe Gln Gln
 770 775 780

Ala Trp Pro Leu Glu Gly Phe Gly Gly Ala Leu Glu Met Lys Gly Arg
 785 790 795 800

Arg Leu Asp Leu Gln Gly Ile Arg Val Leu Lys Lys Gly Pro Gln Asp
 805 810 815

Gly Val Ala Arg Ser Ser Cys Tyr Gly Asp Cys Arg Ser Glu Asp Asp
 820 825 830

Glu Ala Thr Glu Trp Ile Thr Phe Gln Val Lys Arg Val Lys Lys Pro
 835 840 845

Lys Gly Asp His Lys Lys Thr Pro Gly Lys Lys Val Glu Thr Gly Gln
 850 855 860

Ile Glu Asn Gly His Arg Tyr Gln Ala Asn Leu Glu Ile Thr Gly Pro
 865 870 875 880

Lys Val Ala Ser Pro Gly Pro Gln Gly
 885

<210> 45
 <211> 690
 <212> PRT
 <213> Homo sapiens

<400> 45
 Phe Leu Thr Leu Phe Ile Phe Arg Ser Gly Leu Cys Arg Gly Asn Ser
 1 5 10 15

Val Glu Arg Lys Ile Tyr Ile Pro Leu Asn Lys Thr Ala Pro Cys Val
 20 25 30

Arg Leu Leu Asn Ala Thr His Gln Ile Gly Cys Gln Ser Ser Ile Ser
 35 40 45

Gly Asp Thr Gly Val Ile His Val Val Glu Lys Glu Glu Asp Leu Gln
 50 55 60

Trp Val Leu Thr Asp Gly Pro Asn Pro Pro Tyr Met Val Leu Leu Glu
 65 70 75 80

Ser Lys His Phe Thr Arg Asp Leu Met Glu Lys Leu Lys Gly Arg Thr

85

90

95

Ser Arg Ile Ala Gly Leu Ala Val Ser Leu Thr Lys Pro Ser Pro Ala
100 105 110

Ser Gly Phe Ser Pro Ser Val Gln Cys Pro Asn Asp Gly Phe Gly Val
115 120 125

Tyr Ser Asn Ser Tyr Gly Pro Glu Phe Ala His Cys Arg Glu Ile Gln
130 135 140

Trp Asn Ser Leu Gly Asn Gly Leu Ala Tyr Glu Asp Phe Ser Phe Pro
145 150 155 160

Ile Phe Leu Leu Glu Asp Glu Asn Glu Thr Lys Val Ile Lys Gln Cys
165 170 175

Tyr Gln Asp His Asn Leu Ser Gln Asn Gly Ser Ala Pro Thr Phe Pro
180 185 190

Leu Cys Ala Met Gln Leu Phe Ser His Met His Ala Val Ile Ser Thr
195 200 205

Ala Thr Cys Met Arg Arg Ser Ser Ile Gln Ser Thr Phe Ser Ile Asn
210 215 220

Pro Glu Ile Val Cys Asp Pro Leu Ser Asp Tyr Asn Val Trp Ser Met
225 230 235 240

Leu Lys Pro Ile Asn Thr Thr Gly Thr Leu Lys Pro Asp Asp Arg Val
245 250 255

Val Val Ala Ala Thr Arg Leu Asp Ser Arg Ser Phe Phe Trp Asn Val
260 265 270

Ala Pro Gly Ala Glu Ser Ala Val Ala Ser Phe Val Thr Gln Leu Ala
275 280 285

Ala Ala Glu Ala Leu Gln Lys Ala Pro Asp Val Thr Thr Leu Pro Arg
290 295 300

Asn Val Met Phe Val Phe Phe Gln Gly Glu Thr Phe Asp Tyr Ile Gly
305 310 315 320

Ser Ser Arg Met Val Tyr Asp Met Glu Lys Gly Lys Phe Pro Val Gln
325 330 335

Leu Glu Asn Val Asp Ser Phe Val Glu Leu Gly Gln Val Ala Leu Arg
340 345 350

Thr Ser Leu Glu Leu Trp Met His Thr Asp Pro Val Ser Gln Lys Asn
355 360 365

Glu Ser Val Arg Asn Gln Val Glu Asp Leu Leu Ala Thr Leu Glu Lys
370 375 380

Ser Gly Ala Gly Val Pro Ala Val Ile Leu Arg Arg Pro Asn Gln Ser
385 390 395 400

Gln Pro Leu Pro Pro Ser Ser Leu Gln Arg Phe Leu Arg Ala Arg Asn
 405 410 415

 Ile Ser Gly Val Val Leu Ala Asp His Ser Gly Ala Phe His Asn Lys
 420 425 430

 Tyr Tyr Gln Ser Ile Tyr Asp Thr Ala Glu Asn Ile Asn Val Ser Tyr
 435 440 445

 Pro Glu Trp Leu Ser Pro Glu Glu Asp Leu Asn Phe Val Thr Asp Thr
 450 455 460

 Ala Lys Ala Leu Ala Asp Val Ala Thr Val Leu Gly Arg Ala Leu Tyr
 465 470 475 480

 Glu Leu Ala Gly Gly Thr Asn Phe Ser Asp Thr Val Gln Ala Asp Pro
 485 490 495

 Gln Thr Val Thr Arg Leu Leu Tyr Gly Phe Leu Ile Lys Ala Asn Asn
 500 505 510

 Ser Trp Phe Gln Ser Ile Leu Arg Gln Asp Leu Arg Ser Tyr Leu Gly
 515 520 525

 Asp Gly Pro Leu Gln His Tyr Ile Ala Val Ser Ser Pro Thr Asn Thr
 530 535 540

 Thr Tyr Val Val Gln Tyr Ala Leu Ala Asn Leu Thr Gly Thr Val Val
 545 550 555 560

 Asn Leu Thr Arg Glu Gln Cys Gln Asp Pro Ser Lys Val Pro Ser Glu
 565 570 575

 Asn Lys Asp Leu Tyr Glu Tyr Ser Trp Val Gln Gly Pro Leu His Ser
 580 585 590

 Asn Glu Thr Asp Arg Leu Pro Arg Cys Val Arg Ser Thr Ala Arg Leu
 595 600 605

 Ala Arg Ala Leu Ser Pro Ala Phe Glu Leu Ser Gln Trp Ser Ser Thr
 610 615 620

 Glu Tyr Ser Thr Trp Thr Glu Ser Arg Trp Lys Asp Ile Arg Ala Arg
 625 630 635 640

 Ile Phe Leu Ile Ala Ser Lys Glu Leu Glu Leu Ile Thr Leu Thr Val
 645 650 655

 Gly Phe Gly Ile Leu Ile Phe Ser Leu Ile Val Thr Tyr Cys Ile Asn
 660 665 670

 Ala Lys Ala Asp Val Leu Phe Ile Ala Pro Arg Glu Pro Gly Ala Val
 675 680 685

 Ser Tyr
 690

<211> 170
<212> PRT
<213> *Homo sapiens*

<400> 46
 Gln Val Pro Arg Ser Lys Ala Leu Glu Val Thr Lys Leu Ala Ile Glu
 1 5 10 15
 Ala Gly Phe Arg His Ile Asp Ser Ala His Leu Tyr Asn Asn Glu Glu
 20 25 30
 Gln Val Gly Leu Ala Ile Arg Ser Lys Ile Ala Asp Gly Ser Val Lys
 35 40 45
 Arg Glu Asp Ile Phe Tyr Thr Ser Lys Leu Trp Ser Thr Phe His Arg
 50 55 60
 Pro Glu Leu Val Arg Pro Ala Leu Glu Asn Ser Leu Lys Lys Ala Gln
 65 70 75 80
 Leu Asp Tyr Val Asp Leu Tyr Leu Ile His Ser Pro Met Ser Leu Lys
 85 90 95
 Pro Gly Glu Glu Leu Ser Pro Thr Asp Glu Gln Val Ala Lys Val Ile
 100 105 110
 Phe Asp Ile Val Asp Leu Cys Thr Thr Trp Glu Gly Met Glu Lys Cys
 115 120 125
 Lys Asp Gly Arg Asn Trp Gly Lys Ser Ile Gly Val Ser His Phe Asn
 130 135 140
 Pro Gln Ala Leu Gly Met Ser Leu Gln Lys Ala Gly Ile Gln Leu Lys
 145 150 155 160
 Arg Ser Ala Pro Val Glu Cys Pro Ile Tyr
 165 170

<210> 47
<211> 1596
<212> PRT
<213> *Homo sapiens*

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<400> 47
Met Thr Thr Glu Thr Gly Pro Asp Ser Glu Val Lys Lys Ala Gln Glu
      1           5           10          15

Glu Ala Pro Gln Gln Pro Glu Ala Ala Ala Val Thr Thr Pro Val
      20          25          30

Thr Pro Ala Gly His Gly His Pro Glu Ala Asn Ser Asn Glu Lys His
      35          40          45

Pro Ser Gln Gln Asp Thr Arg Pro Ala Glu Gln Ser Leu Asp Met Glu
      50          55          60

Glu Lys Asp Tyr Ser Glu Ala Asp Gly Leu Ser Glu Arg Thr Thr Pro
      65          70          75          80

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45

385

390

395

400

Ser Lys Phe Arg Tyr Ser Gly Arg Thr Gln Ala Gln Thr Arg Gln Ala
405 410 415

Ser Ala Leu Ile Asp Arg Pro Ala Pro Phe Phe Glu Arg Ser Ser Ser
420 425 430

Lys Arg Tyr Thr Met Ser Arg Ser Leu Asp Gly Ala Glu Phe Ser Arg
435 440 445

Pro Ala Ser Val Ser Glu Asn His Asp Ala Gly Pro Asp Gly Asp Lys
450 455 460

Arg Asp Glu Asp Gly Glu Ser Gly Gly Gln Arg Ser Glu Ala Glu Glu
465 470 475 480

Gly Glu Val Arg Thr Pro Thr Lys Ile Lys Glu Leu Lys Phe Leu Asp
485 490 495

Lys Pro Glu Asp Val Leu Leu Lys His Gln Ala Ser Ile Asn Glu Leu
500 505 510

Lys Arg Thr Leu Lys Glu Pro Asn Ser Lys Leu Ile His Arg Asp Arg
515 520 525

Asp Trp Glu Arg Glu Arg Arg Leu Pro Ser Ser Pro Ala Ser Pro Ser
530 535 540

Pro Lys Gly Thr Pro Glu Lys Ala Asn Glu Ser Gln Arg Thr Gln Asp
545 550 555 560

Ile Ser Gln Arg Asp Leu Val Pro Glu Pro Gly Ala Ala Ala Gly Leu
565 570 575

Glu Val Phe Thr Gln Lys Ser Leu Ala Ala Ser Pro Glu Gly Ser Glu
580 585 590

His Trp Val Phe Ile Glu Arg Glu Tyr Thr Arg Pro Glu Glu Leu Gly
595 600 605

Leu Leu Lys Val Thr Thr Met Gln Gln Glu Glu Arg Gln Ala Gly Leu
610 615 620

Ala Gly Ile Leu Ala Asn Gly Arg Leu Ser Lys Val Asp Val Leu Val
625 630 635 640

Asp Lys Phe Lys Val Glu Val Ala Thr Glu Glu Met Val Gly Asn Arg
645 650 655

Arg Ala Asn Thr Gln Gln Gly Lys Met Ile Ala Ser Pro Glu Asp
660 665 670

Phe Glu Ser Val Gly Glu Glu Gly Pro Trp Ile Arg Glu Ser Pro Gly
675 680 685

Gly Ala Ala Leu Ala Ser Gly Arg Thr Leu Ala Glu Lys Leu Leu Glu
690 695 700

Gly Ser Glu Leu Arg Ala Asp Thr Arg Glu Ala Thr Ile Arg Asn Arg
 705 710 715 720
 Cys Met Ser Asp Gly Gln Pro Glu Gly Gln Thr Glu Leu Arg Lys Gly
 725 730 735
 Leu Glu Glu Pro His Thr Cys Gly Arg Pro Thr Ala Pro Gly Thr Arg
 740 745 750
 Pro Ala Glu Val Asp Val Leu Ser Pro Ala Ser Asp Lys Gly Gly Leu
 755 760 765
 Gln Ser Phe Leu Leu Asp Pro Ala His Ala Glu Ala Arg Ala Glu Leu
 770 775 780
 Ser Asn Glu Thr Asp Thr Ser Phe Ala Glu Arg Ser Phe Tyr Leu Asn
 785 790 795 800
 Tyr Glu Glu Lys Asp Ser Glu Asp Gln Val Leu Pro Pro Pro Leu Glu
 805 810 815
 Glu Arg Lys Gly Arg Leu Asp Ala Pro Pro Gly Gly Glu Pro Arg Pro
 820 825 830
 Thr Leu Asn Ser Leu Asp Leu Arg Val Ser Ala Ala Ser Ser Arg
 835 840 845
 Ser Lys Asp Glu Ala His Met Thr Ser Pro Lys Glu Gly Ala Gly Thr
 850 855 860
 Pro Lys Asn His Gly Gly Pro Gly Asp Leu Lys Gly Ser Pro Ala Gly
 865 870 875 880
 Gln Thr Phe Ala Glu Gly Trp Glu Asp Ala Gln Trp Gly Val Glu Gly
 885 890 895
 Glu Phe Pro His Leu Thr Ala Ser Ala Ala Arg Glu Glu Gly Thr Pro
 900 905 910
 Val Ser Gly Asp Leu Leu Gly Lys Ala Glu Glu Ser Pro Thr Glu Glu
 915 920 925
 Leu Lys Lys His Pro Pro His Arg Gly Gln Gly Val His Pro Asp Pro
 930 935 940
 Gln Ala Cys Ala Leu Pro Arg Ala Ile Pro Leu Asn Val Arg Lys Pro
 945 950 955 960
 Val Lys Pro Asp Arg Gly Asn Phe Pro Pro Lys Glu Arg Gly Val Val
 965 970 975
 Pro Thr Gln Lys Gly Gly Ala Glu Leu Lys Asp Arg Glu Ala Ser Ala
 980 985 990
 Phe Leu His Met Glu Val Ile Ile Pro Leu Pro Ala Ser Pro Gly His
 995 1000 1005
 Ser Glu Asp Leu Ala Ala Leu Glu Glu Ala Ser Pro Ser Pro Thr Ser
 1010 1015 1020

His Gly Ser Gly Glu Pro Ser Glu Leu Arg Glu Pro Phe Leu Arg His
 1025 1030 1035 1040
 Val His Leu Ser Lys Ala Ser Pro Glu Pro Lys Asp Gln Val Gly Phe
 1045 1050 1055
 Val Val Ser Pro Ala Thr Gly Gly Glu Arg Arg Pro Pro Pro Ile Thr
 1060 1065 1070
 Ser Arg Lys Pro Arg Val Val Pro Glu Glu Ala Glu Gly Arg Ile Pro
 1075 1080 1085
 Leu Gly Phe Gly Phe Pro Ser Gly Lys Arg Arg Glu Met Thr Ser Phe
 1090 1095 1100
 Gln Ala Gly Asp Gln Glu Gly Ser Leu Glu Asp Ile Ser Lys Thr Ser
 1105 1110 1115 1120
 Val Ala Asn Lys Ile Arg Ile Phe Glu Thr His Gly Ala Glu Thr Arg
 1125 1130 1135
 Arg Met Ser Glu Gly Glu Ala Arg Ser Leu Pro Asn Asp Val Ser Ser
 1140 1145 1150
 Glu Ala Pro Val Gly Gln Ala Glu Gln Gln Arg Ser Thr Leu Ser Asp
 1155 1160 1165
 Leu Gly Phe Ala Gln Leu Gln Pro Pro Gly Asp Phe Ala Ser Pro Lys
 1170 1175 1180
 Ala Thr His Ser Thr Val Ile Pro Leu Ala Thr Arg His Phe Arg Glu
 1185 1190 1195 1200
 Asp Thr Ser Ala Ser Tyr Gln Glu Ala His Thr Glu Leu Glu Pro Val
 1205 1210 1215
 Ser Pro Asn Ser Gly Cys Glu Thr Thr Leu Ala Glu Ala Thr Gly Thr
 1220 1225 1230
 Gly Val Thr Gly Arg Asn Lys Ser Gly Asp Ala Val Arg Glu Glu Lys
 1235 1240 1245
 Arg Ser Thr Asn Leu Ala Ala Asn Thr Pro Gly Lys Gly Gly Arg Leu
 1250 1255 1260
 Arg Phe Ala Ser Pro Ser Gly Pro Gln Arg Ala Gly Leu Arg Glu Gly
 1265 1270 1275 1280
 Ser Glu Glu Lys Val Lys Pro Pro Arg Pro Arg Ala Pro Glu Ser Asp
 1285 1290 1295
 Thr Gly Asp Glu Asp Gln Asp Gln Glu Arg Asp Thr Val Phe Leu Lys
 1300 1305 1310
 Asp Asn His Leu Ala Ile Glu Arg Lys Cys Ser Ser Ile Thr Val Ser
 1315 1320 1325
 Ser Thr Ser Ser Leu Glu Ala Glu Val Asp Phe Thr Val Ile Gly Asp

1330	1335	1340
Tyr His Gly Ser Ala Phe Glu Asp Phe Ser Arg Ser Leu Pro Glu Leu		
1345	1350	1355
Asp Arg Asp Lys Ser Asp Ser Asp Thr Glu Gly Leu Leu Phe Ser Arg		
1365	1370	1375
Asp Leu Asn Lys Gly Ala Pro Ser Gln Asp Asp Glu Ser Gly Gly Ile		
1380	1385	1390
Glu Asp Ser Pro Asp Arg Gly Ala Cys Ser Thr Pro Asp Met Pro Gln		
1395	1400	1405
Phe Glu Pro Val Lys Thr Glu Thr Met Thr Val Ser Ser Leu Ala Ile		
1410	1415	1420
Arg Lys Lys Ile Glu Pro Glu Ala Val Leu Gln Thr Arg Val Ser Ala		
1425	1430	1435
Met Asp Asn Thr Gln Val Asp Gly Ser Ala Ser Val Gly Arg Glu Phe		
1445	1450	1455
Ile Ala Thr Thr Pro Ser Ile Thr Glu Thr Ile Ser Thr Thr Met		
1460	1465	1470
Glu Asn Ser Leu Lys Ser Gly Lys Gly Ala Ala Ala Met Ile Pro Gly		
1475	1480	1485
Pro Gln Thr Val Ala Thr Glu Ile Arg Ser Leu Ser Pro Ile Ile Gly		
1490	1495	1500
Lys Asp Val Leu Thr Ser Thr Tyr Gly Ala Thr Ala Glu Thr Leu Ser		
1505	1510	1515
Thr Ser Thr Thr His Val Thr Lys Thr Val Lys Gly Gly Phe Ser		
1525	1530	1535
Glu Thr Arg Ile Glu Lys Arg Ile Ile Ile Thr Gly Asp Glu Asp Val		
1540	1545	1550
Asp Gln Asp Gln Ala Leu Ala Ile Lys Glu Ala Lys Leu Gln		
1555	1560	1565
His Pro Asp Met Leu Val Thr Lys Ala Val Val Tyr Arg Glu Thr Asp		
1570	1575	1580
Pro Ser Pro Glu Glu Arg Asp Lys Lys Pro Gln Lys		
1585	1590	1595

<210> 48
 <211> 455
 <212> PRT
 <213> Homo sapiens

<400> 48
 Met Ala Ala Pro Glu Glu His Asp Ser Pro Thr Glu Ala Ser Gln Pro
 1 5 10 15

Ile Val Glu Glu Glu Glu Thr Lys Thr Phe Lys Asp Leu Gly Val Thr
 20 25 30
 Asp Val Leu Cys Glu Ala Cys Asp Gln Leu Gly Trp Thr Lys Pro Thr
 35 40 45
 Lys Ile Gln Ile Glu Ala Ile Pro Leu Ala Leu Gln Gly Arg Asp Ile
 50 55 60
 Ile Gly Leu Ala Glu Thr Gly Ser Gly Lys Thr Gly Ala Phe Ala Leu
 65 70 75 80
 Pro Ile Leu Asn Ala Leu Leu Glu Thr Pro Gln Arg Leu Phe Ala Leu
 85 90 95
 Val Leu Thr Pro Thr Arg Glu Leu Ala Phe Gln Ile Ser Glu Gln Phe
 100 105 110
 Glu Ala Leu Gly Ser Ser Ile Gly Val Gln Ser Ala Val Ile Val Gly
 115 120 125
 Gly Ile Asp Ser Met Ser Gln Ser Leu Ala Leu Ala Lys Lys Pro His
 130 135 140
 Ile Ile Ile Ala Thr Pro Gly Arg Leu Ile Asp His Leu Glu Asn Thr
 145 150 155 160
 Lys Gly Phe Asn Leu Arg Ala Leu Lys Tyr Leu Val Met Asp Glu Ala
 165 170 175
 Asp Arg Ile Leu Asn Met Asp Phe Glu Thr Glu Val Asp Lys Ile Leu
 180 185 190
 Lys Val Ile Pro Arg Asp Arg Lys Thr Phe Leu Phe Ser Ala Thr Met
 195 200 205
 Thr Lys Lys Val Gln Lys Leu Gln Arg Ala Ala Leu Lys Asn Pro Val
 210 215 220
 Lys Cys Ala Val Ser Ser Lys Tyr Gln Thr Val Glu Lys Leu Gln Gln
 225 230 235 240
 Tyr Tyr Ile Phe Ile Pro Ser Lys Phe Lys Asp Thr Tyr Leu Val Tyr
 245 250 255
 Ile Leu Asn Glu Leu Ala Gly Asn Ser Phe Met Ile Phe Cys Ser Thr
 260 265 270
 Cys Asn Asn Thr Gln Arg Thr Ala Leu Leu Leu Arg Asn Leu Gly Phe
 275 280 285
 Thr Ala Ile Pro Leu His Gly Gln Met Ser Gln Ser Lys Arg Leu Gly
 290 295 300
 Ser Leu Asn Lys Phe Lys Ala Lys Ala Arg Ser Ile Leu Leu Ala Thr
 305 310 315 320
 Asp Val Ala Ser Arg Gly Leu Asp Ile Pro His Val Asp Val Val Val

50
325 330 335

Asn Phe Asp Ile Pro Thr His Ser Lys Asp Tyr Ile His Arg Val Gly
340 345 350

Arg Thr Ala Arg Ala Gly Arg Ser Gly Lys Ala Ile Thr Phe Val Thr
355 360 365

Gln Tyr Asp Val Glu Leu Phe Gln Arg Ile Glu His Leu Ile Gly Lys
370 375 380

Lys Leu Pro Gly Phe Pro Thr Gln Asp Asp Glu Val Met Met Leu Thr
385 390 395 400

Glu Arg Val Ala Glu Ala Gln Arg Phe Ala Arg Met Glu Leu Arg Glu
405 410 415

His Gly Glu Lys Lys Arg Ser Arg Glu Asp Ala Gly Asp Asn Asp
420 425 430

Asp Thr Glu Gly Ala Ile Gly Val Arg Asn Lys Val Ala Gly Gly Lys
435 440 445

Met Lys Lys Arg Lys Gly Arg
450 455

<210> 49
<211> 246
<212> PRT
<213> Homo sapiens

<400> 49
Met Ala Trp Ala Pro Leu Leu Leu Thr Leu Leu Ser Leu Leu Thr Gly
1 5 10 15

Ser Leu Ser Gln Pro Ile Leu Thr Gln Pro Pro Ser Ala Ser Ala Ser
20 25 30

Leu Gly Ala Ser Val Thr Leu Thr Cys Ser Val Ser Ser Asp Tyr Lys
35 40 45

Asn Leu Glu Val Asp Trp Phe Gln Gln Arg Pro Gly Lys Gly Pro Arg
50 55 60

Phe Val Met Arg Val Gly Thr Gly Val Val Gly Phe Arg Gly Ala
65 70 75 80

Asp Ile Pro Asp Arg Phe Ser Val Ser Gly Ser Gly Leu Asn Arg Phe
85 90 95

Leu Thr Ile Arg Asn Ile Glu Glu Asp Glu Ser Asp Tyr His Cys
100 105 110

Gly Thr Asp Leu Gly Ser Gly Thr Ser Phe Val Ser Trp Val Phe Gly
115 120 125

Gly Gly Thr Lys Leu Thr Val Leu Ser Gln Pro Lys Ala Ala Pro Ser
130 135 140

Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln Ala Asn Lys Ala
 145 150 155 160
 Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly Ala Val Thr Val
 165 170 175
 Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala Gly Val Glu Thr Thr
 180 185 190
 Thr Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala Ser Ser Tyr Leu
 195 200 205
 Ser Leu Thr Pro Glu Gln Trp Lys Ser Asn Arg Ser Tyr Ser Cys Gln
 210 215 220
 Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val Ala Pro Thr Glu
 225 230 235 240
 Cys Ser Thr Glu Cys Ser
 245

<210> 50
 <211> 228
 <212> PRT
 <213> Homo sapiens

<400> 50
 Ala Asn Ala Leu Gly Pro Cys Ala Glu Ile Val Met Thr Gln Thr Pro
 1 5 10 15
 Leu Ser Leu Ser Ile Thr Pro Gly Glu Gln Ala Ser Met Ser Cys Arg
 20 25 30
 Ser Ser Gln Ser Leu Leu His Ser Asp Gly Tyr Thr Tyr Leu Tyr Trp
 35 40 45
 Phe Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Glu Val
 50 55 60
 Ser Asn Arg Phe Ser Gly Val Ser Pro Ile Arg Phe Ser Gly Ser Gly
 65 70 75 80
 Ser Gly Arg Glu Phe Thr Leu Arg Ile Ser Arg Val Glu Ala Asp Asp
 85 90 95
 Ala Gly Val Tyr Tyr Cys Met Gln Thr Thr Gln Thr Pro Asn Thr Phe
 100 105 110
 Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg Thr Val Ala Ala Pro Ser
 115 120 125
 Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala
 130 135 140
 Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val
 145 150 155 160

Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser
 165 170 175

Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr
 180 185 190

Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Leu Tyr Ala Cys
 195 200 205

Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn
 210 215 220

Arg Gly Glu Cys
 225

<210> 51

<211> 106

<212> PRT

<213> Homo sapiens

<400> 51

Gly Gln Pro Lys Ala Asn Pro Thr Val Thr Leu Phe Pro Pro Ser Ser
 1 5 10 15

Glu Glu Leu Gln Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp
 20 25 30

Phe Tyr Pro Gly Ala Val Thr Val Ala Trp Lys Ala Asp Gly Ser Pro
 35 40 45

Val Lys Ala Gly Val Glu Thr Thr Lys Pro Ser Lys Gln Ser Asn Asn
 50 55 60

Lys Tyr Ala Ala Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys
 65 70 75 80

Ser His Arg Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val
 85 90 95

Glu Lys Thr Val Ala Pro Thr Glu Cys Ser
 100 105

<210> 52

<211> 56

<212> PRT

<213> Homo sapiens

<400> 52

Arg Thr Gly Tyr Glu Glu Glu Thr Trp Asn Leu Lys Glu Cys Val Gly
 1 5 10 15

Arg Cys Ala Asn Pro Asn Val Asn Phe Leu Thr Lys Val Glu Ser Pro
 20 25 30

Gly Met Val Gln Arg Trp Gly Leu Leu Leu Cys Arg Arg Asp Ser Arg
 35 40 45

Phe Thr Pro Trp Gln Lys Ile Tyr
50 55

<210> 53
<211> 824
<212> PRT
<213> Homo sapiens

<400> 53
Met Ala Phe Ala Ser Phe Arg Arg Ile Leu Ala Leu Ser Thr Phe Glu
1 5 10 15
Lys Arg Lys Ser Arg Glu Tyr Glu His Val Arg Arg Asp Leu Asp Pro
20 25 30
Asn Glu Val Trp Glu Ile Val Gly Glu Leu Gly Asp Gly Ser Phe Gly
35 40 45
Met Val Tyr Lys Ala Lys Asn Lys Glu Thr Gly Ala Leu Ala Ala Ala
50 55 60
Ile Val Ile Glu Thr Lys Ser Glu Glu Leu Glu Asp Tyr Ile Val
65 70 75 80
Glu Ile Glu Ile Leu Ala Thr Cys Asp His Pro Tyr Ile Val Lys Leu
85 90 95
Leu Gly Ala Tyr Tyr His Asp Gly Lys Leu Trp Ile Met Ile Glu Phe
100 105 110
Cys Pro Gly Gly Ala Val Asp Ala Ile Met Leu Glu Leu Asp Arg Gly
115 120 125
Leu Thr Glu Pro Gln Ile Gln Val Val Cys Arg Gln Met Leu Glu Ala
130 135 140
Leu Asn Phe Leu His Ser Lys Arg Ile Ile His Arg Asp Leu Lys Ala
145 150 155 160
Gly Asn Val Leu Met Thr Leu Glu Gly Asp Ile Arg Leu Ala Asp Phe
165 170 175
Gly Val Ser Ala Lys Asn Leu Lys Thr Leu Gln Lys Arg Asp Ser Phe
180 185 190
Ile Gly Thr Pro Tyr Trp Met Ala Pro Glu Val Val Met Cys Glu Thr
195 200 205
Met Lys Asp Thr Pro Tyr Asp Tyr Lys Ala Asp Ile Trp Ser Leu Gly
210 215 220
Ile Thr Leu Ile Glu Met Ala Gln Ile Glu Pro Pro His His Glu Leu
225 230 235 240
Asn Pro Met Arg Val Leu Leu Lys Ile Ala Lys Ser Asp Pro Pro Thr
245 250 255
Leu Leu Thr Pro Ser Lys Trp Ser Val Glu Phe Arg Asp Phe Leu Lys

260

265

270

Ile Ala Leu Asp Lys Asn Pro Glu Thr Arg Pro Ser Ala Ala Ala Ala
275 280 285

Leu Glu His Pro Phe Val Ser Ser Ile Thr Ser Asn Lys Ala Leu Arg
290 295 300

Glu Leu Val Ala Glu Ala Lys Ala Glu Val Met Glu Glu Ile Glu Asp
305 310 315 320

Gly Arg Asp Glu Gly Glu Glu Asp Ala Val Asp Ala Ala Ser Thr
325 330 335

Leu Glu Asn His Thr Gln Asn Ser Ser Glu Val Ser Pro Pro Ser Leu
340 345 350

Asn Ala Asp Lys Pro Leu Glu Glu Ser Pro Ser Thr Pro Leu Ala Pro
355 360 365

Ser Gln Ser Gln Asp Ser Val Asn Glu Pro Cys Ser Gln Pro Ser Gly
370 375 380

Asp Arg Ser Leu Gln Thr Thr Ser Pro Pro Val Val Ala Pro Gly Asn
385 390 395 400

Glu Asn Gly Leu Ala Val Pro Val Pro Leu Arg Lys Ser Arg Pro Val
405 410 415

Ser Met Asp Ala Arg Ile Gln Val Ala Gln Glu Lys Gln Val Ala Glu
420 425 430

Gln Gly Gly Asp Leu Ser Pro Ala Ala Asn Arg Ser Gln Lys Ala Ser
435 440 445

Gln Ser Arg Pro Asn Ser Ser Ala Leu Glu Thr Leu Gly Gly Glu Lys
450 455 460

Leu Ala Asn Gly Ser Leu Glu Pro Pro Ala Gln Ala Ala Pro Gly Pro
465 470 475 480

Ser Lys Arg Asp Ser Asp Cys Ser Ser Leu Cys Thr Ser Glu Ser Met
485 490 495

Asp Tyr Gly Thr Asn Leu Ser Thr Asp Leu Ser Leu Asn Lys Glu Met
500 505 510

Gly Ser Leu Ser Ile Lys Asp Pro Lys Leu Tyr Lys Lys Thr Leu Lys
515 520 525

Arg Thr Arg Lys Phe Val Val Asp Gly Val Glu Val Ser Ile Thr Thr
530 535 540

Ser Lys Ile Ile Ser Glu Asp Glu Lys Lys Asp Glu Glu Met Arg Phe
545 550 555 560

Leu Arg Arg Gln Glu Leu Arg Glu Leu Arg Leu Leu Gln Lys Glu Glu
565 570 575

His Arg Asn Gln Thr Gln Leu Ser Asn Lys His Glu Leu Gln Leu Glu
 580 585 590

 Gln Met His Lys Arg Phe Glu Gln Glu Ile Asn Ala Lys Lys Lys Phe
 595 600 605

 Phe Asp Thr Glu Leu Glu Asn Leu Glu Arg Gln Gln Lys Gln Gln Val
 610 615 620

 Glu Lys Met Glu Gln Asp His Ala Val Arg Arg Glu Glu Ala Arg
 625 630 640

 Arg Ile Arg Leu Glu Gln Asp Arg Asp Tyr Thr Arg Phe Gln Glu Gln
 645 650 655

 Leu Lys Leu Met Lys Lys Glu Val Lys Asn Glu Val Glu Lys Leu Pro
 660 665 670

 Arg Gln Gln Arg Lys Glu Ser Met Lys Gln Lys Met Glu Glu His Thr
 675 680 685

 Gln Lys Lys Gln Leu Leu Asp Arg Asp Phe Val Ala Lys Gln Lys Glu
 690 695 700

 Asp Leu Glu Leu Ala Met Lys Arg Leu Thr Thr Asp Asn Arg Arg Glu
 705 710 720

 Ile Cys Asp Lys Glu Arg Glu Cys Leu Met Lys Lys Gln Glu Leu Leu
 725 730 735

 Arg Asp Arg Glu Ala Ala Leu Trp Glu Met Glu Glu His Gln Leu Gln
 740 745 750

 Glu Arg His Gln Leu Val Lys Gln Gln Leu Lys Asp Gln Tyr Phe Leu
 755 760 765

 Gln Arg His Glu Leu Leu Arg Lys His Glu Lys Glu Arg Glu Gln Met
 770 775 780

 Gln Arg Tyr Asn Gln Arg Met Ile Glu Gln Leu Lys Val Arg Gln Gln
 785 790 800

 Gln Glu Lys Ala Arg Leu Pro Lys Ile Gln Arg Ser Glu Gly Lys Thr
 805 810 815

 Arg Met Ala Met Tyr Lys Lys Ser
 820

<210> 54
 <211> 1997
 <212> PRT
 <213> Homo sapiens

<400> 54
 Met Leu Ser His Gly Ala Gly Leu Ala Leu Trp Ile Thr Leu Ser Leu
 1 5 10 15

 Leu Gln Thr Gly Leu Ala Glu Pro Glu Arg Cys Asn Phe Thr Leu Ala

20

25

30

Glu Ser Lys Ala Ser Ser His Ser Val Ser Ile Gln Trp Arg Ile Leu
35 40 45

Gly Ser Pro Cys Asn Phe Ser Leu Ile Tyr Ser Ser Asp Thr Leu Gly
50 55 60

Ala Ala Leu Cys Pro Thr Phe Arg Ile Asp Asn Thr Thr Tyr Gly Cys
65 70 75 80

Asn Leu Gln Asp Leu Gln Ala Gly Thr Ile Tyr Asn Phe Arg Ile Ile
85 90 95

Ser Leu Asp Glu Glu Arg Thr Val Val Leu Gln Thr Asp Pro Leu Pro
100 105 110

Pro Ala Arg Phe Gly Val Ser Lys Glu Lys Thr Thr Ser Thr Ser Leu
115 120 125

His Val Trp Trp Thr Pro Ser Ser Gly Lys Val Thr Ser Tyr Glu Val
130 135 140

Gln Leu Phe Asp Glu Asn Asn Gln Lys Ile Gln Gly Val Gln Ile Gln
145 150 155 160

Glu Ser Thr Ser Trp Asn Glu Tyr Thr Phe Phe Asn Leu Thr Ala Gly
165 170 175

Ser Lys Tyr Asn Ile Ala Ile Thr Ala Val Ser Gly Gly Lys Arg Ser
180 185 190

Phe Ser Val Tyr Thr Asn Gly Ser Thr Val Pro Ser Pro Val Lys Asp
195 200 205

Ile Gly Ile Ser Thr Lys Ala Asn Ser Leu Leu Ile Ser Trp Ser His
210 215 220

Gly Ser Gly Asn Val Glu Arg Tyr Arg Leu Met Leu Met Asp Lys Gly
225 230 235 240

Ile Leu Val His Gly Val Val Asp Lys His Ala Thr Ser Tyr Ala
245 250 255

Phe His Gly Leu Ser Pro Gly Tyr Leu Tyr Asn Leu Thr Val Met Thr
260 265 270

Glu Ala Ala Gly Leu Gln Asn Tyr Arg Trp Lys Leu Val Arg Thr Ala
275 280 285

Pro Met Glu Val Ser Asn Leu Lys Val Thr Asn Asp Gly Ser Leu Thr
290 295 300

Ser Leu Lys Val Lys Trp Gln Arg Pro Pro Gly Asn Val Asp Ser Tyr
305 310 315 320

Asn Ile Thr Leu Ser His Lys Gly Thr Ile Lys Glu Ser Arg Val Leu
325 330 335

Ala Pro Trp Ile Thr Glu Thr His Phe Lys Glu Leu Val Pro Gly Arg
 340 345 350

Leu Tyr Gln Val Thr Val Ser Cys Val Ser Gly Glu Leu Ser Ala Gln
 355 360 365

Lys Met Ala Val Gly Arg Thr Phe Pro Asp Lys Val Ala Asn Leu Glu
 370 375 380

Ala Asn Asn Asn Gly Arg Met Arg Ser Leu Val Val Ser Trp Ser Pro
 385 390 395 400

Pro Ala Gly Asp Trp Glu Gln Tyr Arg Ile Leu Leu Phe Asn Asp Ser
 405 410 415

Val Val Leu Leu Asn Ile Thr Val Gly Lys Glu Glu Thr Gln Tyr Val
 420 425 430

Met Asp Asp Thr Gly Leu Val Pro Gly Arg Gln Tyr Glu Val Glu Val
 435 440 445

Ile Val Glu Ser Gly Asn Leu Lys Asn Ser Glu Arg Cys Gln Gly Arg
 450 455 460

Thr Val Pro Leu Ala Val Leu Gln Leu Arg Val Lys His Ala Asn Glu
 465 470 475 480

Thr Ser Leu Ser Ile Met Trp Gln Thr Pro Val Ala Glu Trp Glu Lys
 485 490 495

Tyr Ile Ile Ser Leu Ala Asp Arg Asp Leu Leu Leu Ile His Lys Ser
 500 505 510

Leu Ser Lys Asp Ala Lys Glu Phe Thr Phe Thr Asp Leu Val Pro Gly
 515 520 525

Arg Lys Tyr Met Ala Thr Val Thr Ser Ile Ser Gly Asp Leu Lys Asn
 530 535 540

Ser Ser Ser Val Lys Gly Arg Thr Val Pro Ala Gln Val Thr Asp Leu
 545 550 555 560

His Val Ala Asn Gln Gly Met Thr Ser Ser Leu Phe Thr Asn Trp Thr
 565 570 575

Gln Ala Gln Gly Asp Val Glu Phe Tyr Gln Val Leu Leu Ile His Glu
 580 585 590

Asn Val Val Ile Lys Asn Glu Ser Ile Ser Ser Glu Thr Ser Arg Tyr
 595 600 605

Ser Phe His Ser Leu Lys Ser Gly Ser Leu Tyr Ser Val Val Val Thr
 610 615 620

Thr Val Ser Gly Gly Ile Ser Ser Arg Gln Val Val Val Glu Gly Arg
 625 630 635 640

Thr Val Pro Ser Ser Val Ser Gly Val Thr Val Asn Asn Ser Gly Arg
 645 650 655

Asn Asp Tyr Leu Ser Val Ser Trp Leu Val Ala Pro Gly Asp Val Asp
 660 665 670
 Asn Tyr Glu Val Thr Leu Ser His Asp Gly Lys Val Val Gln Ser Leu
 675 680 685
 Val Ile Ala Lys Ser Val Arg Glu Cys Ser Phe Ser Ser Leu Thr Pro
 690 695 700
 Gly Arg Leu Tyr Thr Val Thr Ile Thr Arg Ser Gly Lys Tyr Glu
 705 710 715 720
 Asn His Ser Phe Ser Gln Glu Arg Thr Val Pro Asp Lys Val Gln Gly
 725 730 735
 Val Ser Val Ser Asn Ser Ala Arg Ser Asp Tyr Leu Arg Val Ser Trp
 740 745 750
 Val Tyr Ala Thr Gly Asp Phe Asp His Tyr Glu Val Thr Ile Lys Asn
 755 760 765
 Lys Asn Asn Phe Ile Gln Thr Lys Ser Ile Pro Lys Ser Glu Asn Glu
 770 775 780
 Cys Val Phe Val Gln Leu Val Pro Gly Arg Leu Tyr Ser Val Thr Val
 785 790 795 800
 Thr Thr Lys Ser Gly Gln Tyr Glu Ala Asn Glu Gln Gly Asn Gly Arg
 805 810 815
 Thr Ile Pro Glu Pro Val Lys Asp Leu Thr Leu Arg Asn Arg Ser Thr
 820 825 830
 Glu Asp Leu His Val Thr Trp Ser Gly Ala Asn Gly Asp Val Asp Gln
 835 840 845
 Tyr Glu Ile Gln Leu Leu Phe Asn Asp Met Lys Val Phe Pro Pro Phe
 850 855 860
 His Leu Val Asn Thr Ala Thr Glu Tyr Arg Phe Thr Ser Leu Thr Pro
 865 870 875 880
 Gly Arg Gln Tyr Lys Ile Leu Val Leu Thr Ile Ser Gly Asp Val Gln
 885 890 895
 Gln Ser Ala Phe Ile Glu Gly Phe Thr Val Pro Ser Ala Val Lys Asn
 900 905 910
 Ile His Ile Ser Pro Asn Gly Ala Thr Asp Ser Leu Thr Val Asn Trp
 915 920 925
 Thr Pro Gly Gly Asp Val Asp Ser Tyr Thr Val Ser Ala Phe Arg
 930 935 940
 His Ser Gln Lys Val Asp Ser Gln Thr Ile Pro Lys His Val Phe Glu
 945 950 955 960
 His Thr Phe His Arg Leu Glu Ala Gly Glu Gln Tyr Gln Ile Met Ile

965

970

975

Ala Ser Val Ser Gly Ser Leu Lys Asn Gln Ile Asn Val Val Gly Arg
980 985 990

Thr Val Pro Ala Ser Val Gln Gly Val Ile Ala Asp Asn Ala Tyr Ser
995 1000 1005

Ser Tyr Ser Leu Ile Val Ser Trp Gln Lys Ala Ala Gly Val Ala Glu
1010 1015 1020

Arg Tyr Asp Ile Leu Leu Thr Glu Asn Gly Ile Leu Leu Arg Asn
1025 1030 1035 1040

Thr Ser Glu Pro Ala Thr Thr Lys Gln His Lys Phe Glu Asp Leu Thr
1045 1050 1055

Pro Gly Lys Lys Tyr Lys Ile Gln Ile Leu Thr Val Ser Gly Gly Leu
1060 1065 1070

Phe Ser Lys Glu Ala Gln Thr Glu Gly Arg Thr Val Pro Ala Ala Val
1075 1080 1085

Thr Asp Leu Arg Ile Thr Glu Asn Ser Thr Arg His Leu Ser Phe Arg
1090 1095 1100

Trp Thr Ala Ser Glu Gly Glu Leu Ser Trp Tyr Asn Ile Phe Leu Tyr
1105 1110 1115 1120

Asn Pro Asp Gly Asn Leu Gln Glu Arg Ala Gln Val Asp Pro Leu Val
1125 1130 1135

Gln Ser Phe Ser Phe Gln Asn Leu Leu Gln Gly Arg Met Tyr Lys Met
1140 1145 1150

Val Ile Val Thr His Ser Gly Glu Leu Ser Asn Glu Ser Phe Ile Phe
1155 1160 1165

Gly Arg Thr Val Pro Ala Ser Val Ser His Leu Arg Gly Ser Asn Arg
1170 1175 1180

Asn Thr Thr Asp Ser Leu Trp Phe Asn Trp Ser Pro Ala Ser Gly Asp
1185 1190 1195 1200

Phe Asp Phe Tyr Glu Leu Ile Leu Tyr Asn Pro Asn Gly Thr Lys Lys
1205 1210 1215

Glu Asn Trp Lys Asp Lys Asp Leu Thr Glu Trp Arg Phe Gln Gly Leu
1220 1225 1230

Val Pro Gly Arg Lys Tyr Val Leu Trp Val Val Thr His Ser Gly Asp
1235 1240 1245

Leu Ser Asn Lys Val Thr Ala Glu Ser Arg Thr Ala Pro Ser Pro Pro
1250 1255 1260

Ser Leu Met Ser Phe Ala Asp Ile Ala Asn Thr Ser Leu Ala Ile Thr
1265 1270 1275 1280

Trp Lys Gly Pro Pro Asp Trp Thr Asp Tyr Asn Asp Phe Glu Leu Gln
 1285 1290 1295

Trp Leu Pro Arg Asp Ala Leu Thr Val Phe Asn Pro Tyr Asn Asn Arg
 1300 1305 1310

Lys Ser Glu Gly Arg Ile Val Tyr Gly Leu Arg Pro Gly Arg Ser Tyr
 1315 1320 1325

Gln Phe Asn Val Lys Thr Val Ser Gly Asp Ser Trp Lys Thr Tyr Ser
 1330 1335 1340

Lys Pro Ile Phe Gly Ser Val Arg Thr Lys Pro Asp Lys Ile Gln Asn
 1345 1350 1355 1360

Leu His Cys Arg Pro Gln Asn Ser Thr Ala Ile Ala Cys Ser Trp Ile
 1365 1370 1375

Pro Pro Asp Ser Asp Phe Asp Gly Tyr Ser Ile Glu Cys Arg Lys Met
 1380 1385 1390

Asp Thr Gln Glu Val Glu Phe Ser Arg Lys Leu Glu Lys Glu Lys Ser
 1395 1400 1405

Leu Leu Asn Ile Met Met Leu Val Pro His Lys Arg Tyr Leu Val Ser
 1410 1415 1420

Ile Lys Val Gln Ser Ala Gly Met Thr Ser Glu Val Val Glu Asp Ser
 1425 1430 1435 1440

Thr Ile Thr Met Ile Asp Arg Pro Pro Pro Pro Pro His Ile Arg
 1445 1450 1455

Val Asn Glu Lys Asp Val Leu Ile Ser Lys Ser Ser Ile Asn Phe Thr
 1460 1465 1470

Val Asn Cys Ser Trp Phe Ser Asp Thr Asn Gly Ala Val Lys Tyr Phe
 1475 1480 1485

Thr Val Val Val Arg Glu Ala Asp Gly Ser Asp Glu Leu Lys Pro Glu
 1490 1495 1500

Gln Gln His Pro Leu Pro Ser Tyr Leu Glu Tyr Arg His Asn Ala Ser
 1505 1510 1515 1520

Ile Arg Val Tyr Gln Thr Asn Tyr Phe Ala Ser Lys Cys Ala Glu Asn
 1525 1530 1535

Pro Asn Ser Asn Ser Lys Ser Phe Asn Ile Lys Leu Gly Ala Glu Met
 1540 1545 1550

Glu Ser Leu Gly Gly Lys Cys Asp Pro Thr Gln Gln Lys Phe Cys Asp
 1555 1560 1565

Gly Pro Leu Lys Pro His Thr Ala Tyr Arg Ile Ser Ile Arg Ala Phe
 1570 1575 1580

Thr Gln Leu Phe Asp Glu Asp Leu Lys Glu Phe Thr Lys Pro Leu Tyr
 1585 1590 1595 1600

Ser Asp Thr Phe Phe Ser Leu Pro Ile Thr Thr Glu Ser Glu Pro Leu
 1605 1610 1615
 Phe Gly Ala Ile Glu Gly Val Ser Ala Gly Leu Phe Leu Ile Gly Met
 1620 1625 1630
 Leu Val Ala Val Val Ala Leu Leu Ile Cys Arg Gln Lys Val Ser His
 1635 1640 1645
 Gly Arg Glu Arg Pro Ser Ala Arg Leu Ser Ile Arg Arg Asp Arg Pro
 1650 1655 1660
 Leu Ser Val His Leu Asn Leu Gly Gln Lys Gly Asn Arg Lys Thr Ser
 1665 1670 1675 1680
 Cys Pro Ile Lys Ile Asn Gln Phe Glu Gly His Phe Met Lys Leu Gln
 1685 1690 1695
 Ala Asp Ser Asn Tyr Leu Leu Ser Lys Glu Tyr Glu Glu Leu Lys Asp
 1700 1705 1710
 Val Gly Arg Asn Gln Ser Cys Asp Ile Ala Leu Leu Pro Glu Asn Arg
 1715 1720 1725
 Gly Lys Asn Arg Tyr Asn Asn Ile Leu Pro Tyr Asp Ala Thr Arg Val
 1730 1735 1740
 Lys Leu Ser Asn Val Asp Asp Pro Cys Ser Asp Tyr Ile Asn Ala
 1745 1750 1755 1760
 Ser Tyr Ile Pro Gly Asn Asn Phe Arg Arg Glu Tyr Ile Val Thr Gln
 1765 1770 1775
 Gly Pro Leu Pro Gly Thr Lys Asp Asp Phe Trp Lys Met Val Trp Glu
 1780 1785 1790
 Gln Asn Val His Asn Ile Val Met Val Thr Gln Cys Val Glu Lys Gly
 1795 1800 1805
 Arg Val Lys Cys Asp His Tyr Trp Pro Ala Asp Gln Asp Ser Leu Tyr
 1810 1815 1820
 Tyr Gly Asp Leu Ile Leu Gln Met Leu Ser Glu Ser Val Leu Pro Glu
 1825 1830 1835 1840
 Trp Thr Ile Arg Glu Phe Lys Ile Cys Gly Glu Glu Gln Leu Asp Ala
 1845 1850 1855
 His Arg Leu Ile Arg His Phe His Tyr Thr Val Trp Pro Asp His Gly
 1860 1865 1870
 Val Pro Glu Thr Thr Gln Ser Leu Ile Gln Phe Val Arg Thr Val Arg
 1875 1880 1885
 Asp Tyr Ile Asn Arg Ser Pro Gly Ala Gly Pro Thr Val Val His Cys
 1890 1895 1900
 Ser Ala Gly Val Gly Arg Thr Gly Thr Phe Ile Ala Leu Asp Arg Ile

1905 1910 1915 1920

Leu Gln Gln Leu Asp Ser Lys Asp Ser Val Asp Ile Tyr Gly Ala Val
 1925 1930 1935

His	Asp	Leu	Arg	Leu	His	Arg	Val	His	Met	Val	Gln	Thr	Glu	Cys	Gln
	1940							1945						1950	

Tyr Val Tyr Leu His Gln Cys Val Arg Asp Val Leu Arg Ala Arg Lys
 1955 1960 1965

Leu Arg Ser Glu Gln Glu Asn Pro Leu Phe Pro Ile Tyr Glu Asn Val
1970 1975 1980

Asn Pro Glu Tyr His Arg Asp Pro Val Tyr Ser Arg His
1985 1990 1995

<210> 55
<211> 453
<212> PRT
<213> *Homo sapiens*

<400> 55
Met Lys Leu Leu Val Ile Leu Leu Phe Ser Gly Leu Ile Thr Gly Phe
1 5 10 15

Arg Ser Asp Ser Ser Ser Leu Pro Pro Lys Leu Leu Leu Val Ser
 20 25 30

Phe Asp Gly Phe Arg Ala Asp Tyr Leu Lys Asn Tyr Glu Phe Pro His
 35 40 45

Leu Gln Asn Phe Ile Lys Glu Gly Val Leu Val Glu His Val Lys Asn
50 55 60

Val Phe Ile Thr Lys Thr Phe Pro Asn His Tyr Ser Ile Val Thr Gly
65 70 75 80

Leu Tyr Glu Glu Ser His Gly Ile Val Ala Asn Ser Met Tyr Asp Ala
85 90 95

Val Thr Lys Lys His Phe Ser Asp Ser Asn Asp Lys Asp Pro Phe Trp
 100 105 110

Trp Asn Glu Ala Val Pro Ile Trp Val Thr Asn Gln Leu Gln Glu Asn
115 120 125

Arg Ser Ser Ala Ala Ala Met Trp Pro Gly Thr Asp Val Pro Ile His
100 105 110 115 120 125 130 135 140

Asp Thr Ile Ser Ser Tyr Phe Met Asn Tyr Asn Ser Ser Val Ser Phe

Glu Glu Arg Leu Asn Asn Ile Thr Met Trp Leu Asn Asn Ser Asn Pro
170 171 172 173 174 175

Pro Val Thr Phe Ala Thr Leu Tyr Trp Glu Glu Pro Asp Ala Ser Gly

His Lys Tyr Gly Pro Glu Asp Lys Glu Asn Met Ser Arg Val Leu Lys
 195 200 205
 Lys Ile Asp Asp Leu Ile Gly Asp Leu Val Gln Arg Leu Lys Met Leu
 210 215 220
 Gly Leu Trp Glu Asn Leu Asn Val Ile Ile Thr Ser Asp His Gly Met
 225 230 235 240
 Thr Gln Cys Ser Gln Asp Arg Leu Ile Asn Leu Asp Ser Cys Ile Asp
 245 250 255
 His Ser Tyr Tyr Thr Leu Ile Asp Leu Ser Pro Val Ala Ala Ile Leu
 260 265 270
 Pro Lys Ile Asn Arg Thr Glu Val Tyr Asn Lys Leu Lys Asn Cys Ser
 275 280 285
 Pro His Met Asn Val Tyr Leu Lys Glu Asp Ile Pro Asn Arg Phe Tyr
 290 295 300
 Tyr Gln His Asn Asp Arg Ile Gln Pro Ile Ile Leu Val Ala Asp Glu
 305 310 315 320
 Gly Trp Thr Ile Val Leu Asn Glu Ser Ser Gln Lys Leu Gly Asp His
 325 330 335
 Gly Tyr Asp Asn Ser Leu Pro Ser Met His Pro Phe Leu Ala Ala His
 340 345 350
 Gly Pro Ala Phe His Lys Gly Tyr Lys His Ser Thr Ile Asn Ile Val
 355 360 365
 Asp Ile Tyr Pro Met Met Cys His Ile Leu Gly Leu Lys Pro His Pro
 370 375 380
 Asn Asn Gly Thr Phe Gly His Thr Lys Cys Leu Leu Val Asp Gln Trp
 385 390 395 400
 Cys Ile Asn Leu Pro Glu Ala Ile Ala Ile Val Ile Gly Ser Leu Leu
 405 410 415
 Val Leu Thr Met Leu Thr Cys Leu Ile Ile Met Gln Asn Arg Leu
 420 425 430
 Ser Val Pro Arg Pro Phe Ser Arg Leu Gln Leu Gln Glu Asp Asp Asp
 435 440 445
 Asp Pro Leu Ile Gly
 450

<210> 56
 <211> 537
 <212> PRT
 <213> Homo sapiens

<400> 56

Met Ser Lys Pro His Ser Glu Ala Gly Thr Ala Phe Ile Gln Thr Gln
 1 5 10 15

Gln Leu His Ala Ala Met Ala Asp Thr Phe Leu Glu His Met Cys Arg
 20 25 30

Leu Asp Ile Asp Ser Pro Pro Ile Thr Ala Arg Asn Thr Gly Ile Ile
 35 40 45

Cys Thr Ile Gly Pro Ala Ser Arg Ser Val Glu Thr Leu Lys Glu Met
 50 55 60

Ile Lys Ser Gly Met Asn Val Ala Arg Leu Asn Phe Ser His Gly Thr
 65 70 75 80

His Glu Tyr His Ala Glu Thr Ile Lys Asn Val Arg Thr Ala Thr Glu
 85 90 95

Ser Phe Ala Ser Asp Pro Ile Leu Tyr Arg Pro Val Ala Val Ala Leu
 100 105 110

Asp Thr Lys Gly Pro Glu Ile Arg Thr Gly Leu Ile Lys Gly Ser Gly
 115 120 125

Thr Ala Glu Val Glu Leu Lys Gly Ala Thr Leu Lys Ile Thr Leu
 130 135 140

Asp Asn Ala Tyr Met Glu Lys Cys Asp Glu Asn Ile Leu Trp Leu Asp
 145 150 155 160

Tyr Lys Asn Ile Cys Lys Val Val Glu Val Gly Ser Lys Ile Tyr Val
 165 170 175

Asp Asp Gly Leu Ile Ser Leu Gln Val Lys Gln Lys Gly Ala Asp Phe
 180 185 190

Leu Val Thr Glu Val Glu Asn Gly Gly Ser Leu Gly Ser Lys Lys Gly
 195 200 205

Val Asn Leu Pro Gly Ala Ala Val Asp Leu Pro Ala Val Ser Glu Lys
 210 215 220

Asp Ile Pro Gly Ser Glu Ser Leu Gly Val Glu Gln Asp Val Asp Met
 225 230 235 240

Val Phe Ala Ser Phe His Pro Ala Lys Ala Ser Gly Cys Pro Met Glu
 245 250 255

Ala Leu Gly Ala Val Leu Gly Arg Glu Gly Lys Arg Asn Ile Lys Ile
 260 265 270

Ile Ser Lys Ile Glu Asn His Glu Gly Val Arg Arg Phe Asp Glu Ile
 275 280 285

Leu Glu Ala Ser Asp Gly Ile Met Val Ala Arg Gly Asp Leu Gly Ile
 290 295 300

Glu Ile Pro Ala Glu Lys Val Phe Leu Ala Gln Lys Met Met Ile Gly
 305 310 315 320

Arg Cys Asn Pro Arg Thr Gly Lys Pro Val Ile Cys Ala Thr Gln Met
325 330 335

Leu Glu Ser Ile Ile Lys Lys Pro Arg Pro Thr Arg Ala Glu Gly Ser
340 345 350

Asp Val Ala Asn Ala Val Leu Asp Gly Ala Asp Cys Ile Met Leu Ser
355 360 365

Gly Glu Thr Ala Lys Gly Asp Tyr Pro Leu Glu Ala Val Arg Met Gln
370 375 380

His Leu Ile Ala Arg Glu Ala Glu Ala Ala Ile Tyr His Leu Gln Leu
385 390 395 400

Phe Glu Glu Leu Arg Arg Leu Ala Pro Ile Thr Ser Asp Pro Thr Glu
405 410 415

Ala Thr Ala Val Gly Ala Val Glu Ala Ser Phe Lys Cys Cys Ser Gly
420 425 430

Ala Ile Ile Val Leu Thr Lys Ser Gly Arg Ser Ala His Gln Val Ala
435 440 445

Arg Tyr Arg Pro Arg Ala Pro Ile Ile Ala Val Thr Arg Asn Pro Gln
450 455 460

Thr Ala Arg Gln Ala His Leu Tyr Arg Gly Ile Phe Pro Val Leu Cys
465 470 475 480

Lys Asp Pro Val Gln Glu Ala Trp Ala Glu Asp Val Asp Leu Arg Val
485 490 495

Asn Phe Ala Met Asn Val Gly Lys Ala Arg Gly Phe Phe Lys Lys Gly
500 505 510

Asp Val Val Ile Val Leu Thr Gly Trp Arg Pro Gly Ser Gly Phe Thr
515 520 525

Asn Thr Met Arg Val Val Pro Val Pro
530 535